



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,467	02/14/2007	Alessandro Facchin	78857.105669	1533
86528	7590	08/04/2009		
King & Spalding LLP 401 Congress Avenue Suite 3200 Austin, TX 78701			EXAMINER KIM, CHRISTOPHER S	
			ART UNIT 3752	PAPER NUMBER
			MAIL DATE 08/04/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/597,467	<b>Applicant(s)</b> FACCHIN, ALESSANDRO	
	<b>Examiner</b> Christopher S. Kim	<b>Art Unit</b> 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 9, 2009 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites the limitation "enable micrometric deformations of the seat part when engaged in the needle seat" in line 7. The disclosure, as originally filed, fails to teach enabling micrometric deformations of the seat part when engaged in the needle seat. Claims 10, 11, 13 and 20 recite the same limitation.

5. Claims 3-5 and 11-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "a filler part that is taken in the cavity." The recitation renders the claim indefinite where claim 1 defines "wherein the cavity is empty."

Claim 3 recites the limitation "a filler part that is taken in the cavity." The recitation is a double inclusion of the "material" where claim 1 defines "wherein the cavity is filled with a material."

Claim 3 recites the limitation "a material" in line 2. It appears to be a double inclusion of the "material" recited in claim 1 and/or the "filler part" recited in claim 3.

Claim 13 recites the limitation "a filler part that is arranged within the cavity." The recitation renders the claim indefinite where claim 11 defines "wherein the cavity is empty."

Claim 13 recites the limitation "a filler part that is arranged within the cavity." The recitation is a double inclusion of the "material" where claim 13 defines "wherein the cavity is filled with a material."

Claim 13 recites the limitation "a material" in line 2. It appears to be a double inclusion of the "material" recited in claim 11 and/or the "filler part" recited in claim 13.

***Claim Rejections - 35 USC § 102***

6. Claims 1-4, 6-8, 10-14, 16-18, 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Palma (4,423,842).

Palma discloses a valve body comprising:

- a needle 8;
- a cartridge 32;
- a recess 45;
- a seat plate 46 comprising:
  - a needle seat 55;
- the needle 8 further comprising:
  - a seat-part comprising:
    - a sealing area 74;
    - a cavity 91;
- a filler part 90;
- a sack volume 56.

The functional recitation "...makes the seat-part flexible in the sealing area" in lines 11-12 merely requires the ability to flex. Substantially all materials are capable of some degree of flexure.

***Claim Rejections - 35 USC § 103***

7. Claims 5, 9, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palma (4,423,842).

Regarding claims 5 and 15, Palma discloses the limitations of the claimed invention with the exception of the filler part consisting of plastics. Plastics are well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have made the filler part of Palma from plastics to reduce corrosion.

Regarding claims 9 and 19, Palma discloses the limitations of the claimed invention with the exception of the needle being inserted into the ball to define the cavity. Doing so is merely making the Palma's needle and ball as separate elements. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided a separate needle and ball in the device of Palma, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

8. Claims 1, 3, 4, 6, 7, 10, 11, 13, 14, 16, 17, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lambert et al. (6,338,445) in view of Stier (6,631,854).

Lambert discloses a valve body comprising:

a needle 12;

a cartridge 10;

a needle seat 13a;

the needle further comprising:

a seat-part comprising:

a sealing area 12b;

a cavity 17a, 27;

a filler part 18a;

a sack volume 37;

an actuator unit (fuel pump).

Lambert discloses the seat-part being flexible in figures 6 and 7 and in column 9, lines 55-60.

Lambert differs from what is being claimed in the cartridge comprising a seat plate. Lambert's seat plate is integral with the cartridge.

Stier discloses a fuel injector valve having a cartridge 2 having a seat plate 6.

It would have been obvious to a person having ordinary skill in the art at the time of the invention to have made the cartridge of Lambert into two parts to include a seat plate as taught by Stier to ease manufacturing.

### ***Response to Arguments***

9. Applicant's arguments filed June 9, 2009 have been fully considered but they are not persuasive.

Applicant argues that the prior art fails to teach enabling micrometric deformations of the seat part. Micrometric deformation is not a positively recited

limitation. The cavity merely must enable micrometric deformation. In addition, normal wear would constitute micrometric deformation.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571) 272-4905. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher S. Kim/  
Primary Examiner, Art Unit 3752



Application/Control Number: 10/597,467  
Art Unit: 3752

Page 8

CK